JC06 Rec'd PCT/PTO 19 MAY 2005

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X16700B_US seq list revised Natl 12May2005.ST25.txt
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chain hinge region of L530
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X16700B_US seq list revised Natl 12May2005.ST25.txt 245 250 255 Glu Thr Glu Ile Ile Lys Cys Leu Arg Asn Lys Asp Pro Gln Glu Ile 260 265 270 Leu Leu Asn Glu Ala Phe Val Val Pro Tyr Gly Thr Pro Leu Ser Val 275 280 285 Asn Phe Gly Pro Thr Val Asp Gly Asp Phe Leu Thr Asp Met Pro Asp 290 . 295 300 Ile Leu Leu Glu Leu Gly Gln Phe Lys Lys Thr Gln Ile Leu Val Gly 305 310 315 320 Val Asn Lys Asp Glu Gly Thr Ala Phe Leu Val Tyr Gly Ala Pro Gly 325 330 335 Phe Ser Lys Asp Asn Asn Ser Ile Ile Thr Arg Lys Glu Phe Gln Glu 340 345 350Gly Leu Lys Ile Phe Phe Pro Gly Val Ser Glu Phe Gly Lys Glu Ser 355 360 Ile Leu Phe His Tyr Thr Asp Trp Val Asp Asp Gln Arg Pro Glu Asn 370 380 Tyr Arg Glu Ala Leu Gly Asp Val Gly Asp Tyr Asn Phe Ile Cys 385 390 395 Pro Ala Leu Glu Phe Thr Lys Lys Phe Ser Glu Trp Gly Asn Asn Ala 405 410 415 Phe Phe Tyr Tyr Phe Glu His Arg Ser Ser Lys Leu Pro Trp Pro Glu 420 425 430 Trp Met Gly Val Met His Gly Tyr Glu Ile Glu Phe Val Phe Gly Leu 435 440 Pro Leu Glu Arg Arg Asp Asn Tyr Thr Lys Ala Glu Glu Ile Leu Ser 450 460 Arg Ser Ile Val Lys Arg Trp Ala Asn Phe Ala Lys Tyr Gly Asn Pro 465 470 475 480 Asn Glu Thr Gln Asn Asn Ser Thr Ser Trp Pro Val Phe Lys Ser Thr 485 490 495 X16700B_US seq list revised Natl 12May2005.ST25.txt
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Synthetic butyrylcholinesterase variant

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X16700B_US seq list revised Natl 12May2005.ST25.txt

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1722

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X16700B_US seq list revised Natl 12May2005.ST25.txt

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1722

Ile Tyr Gly Gly Gly Phe Gln Thr Gly Thr Ser Ser Leu His Val Tyr 115 120 125 Page 57

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X16700B_US seq list revised Natl 12May2005.ST25.txt

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1500

1560

1620

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X16700B_US seq list revised Natl 12May2005.ST25.txt								
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Synthetic butyrylcholinesterase variant Page 107

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Page 161

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X16700B_US seq list revised Natl 12May2005.ST25.txt 485 490 495

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X16700B_US seq list revised Natl 12May2005.ST25.txt

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X16700B_US seq list revised Natl 12May2005.ST25.txt

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X16700B_US seq list revised Natl 12May2005.ST25.txt

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X16700B_US seq list revised Natl 12May2005.ST25.txt Val Asn Lys Asp Glu Gly Thr Ala Phe Leu Val Tyr Gly Ala Pro Gly 325 330 335 Phe Ser Lys Asp Asn Asn Ser Ile Ile Thr Arg Lys Glu Phe Gln Glu 340 345 350 Gly Leu Lys Ile Phe Phe Pro Gly Val Ser Glu Phe Gly Lys Glu Ser 355 360 Ile Leu Phe His Tyr Thr Asp Trp Val Asp Asp Gln Arg Pro Glu Asn 370 375 380 Tyr Arg Glu Ala Leu Gly Asp Val Val Gly Asp Tyr Asn Phe Ile Cys 385 390 395 400 Pro Ala Leu Glu Phe Thr Lys Lys Phe Ser Glu Trp Gly Asn Asn Ala 405 410 415 Phe Phe Tyr Tyr Phe Glu His Arg Ser Ser Lys Leu Pro Trp Pro Glu 420 425 430 Trp Gly Gly Val Met His Gly Tyr Glu Ile Glu Phe Val Phe Gly Leu 435 440 445 Pro Leu Glu Arg Arg Asp Asn Tyr Thr Lys Ala Glu Glu Ile Leu Ser 450 460 Arg Ser Ile Val Lys Arg Trp Ala Asn Phe Ala Lys Tyr Gly Asn Pro 465 470 475 480 Asn Glu Thr Gln Asn Asn Ser Thr Ser Trp Pro Val Phe Lys Ser Thr 485 490 495 Glu Gln Lys Tyr Leu Thr Leu Asn Thr Glu Ser Thr Arg Ile Met Thr 500 510 Lys Leu Arg Ala Gln Gln Cys Arg Phe Trp Thr Ser Phe Pro Lys 515 520 525 Val Leu Glu Met Thr Gly Asn Ile Asp Glu Ala Glu Trp Glu Trp Lys 530 540 Ala Gly Phe His Arg Trp Asn Asn Tyr Met Met Asp Trp Lys Asn Gln 545 550 560 Phe Asn Asp Tyr Thr Ser Lys Lys Glu Ser Cys Val Gly Leu 565 570 Page 240

X16700B_US seq list revised Natl 12May2005.ST25.txt

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X16700B_US seq list revised Natl 12May2005.ST25.txt
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Page 246

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x16700B_US_seq list revised Natl 12May2005.ST25.txt

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X16700B_US seq list revised Natl 12May2005.ST25.txt 295 300 290 Ile'Leu Leu Glu Leu Gly Gln Phe Lys Lys Thr Gln Ile Leu Val Gly 305 310 315 320 Val Asn Lys Asp Glu Gly Thr Ala Phe Leu Val Tyr Gly Ala Pro Gly 325 330 335 Phe Ser Lys Asp Asn Asn Ser Ile Ile Thr Arg Lys Glu Phe Gln Glu 340 345 350Gly Leu Lys Ile Phe Phe Pro Gly Val Ser Glu Phe Gly Lys Glu Ser 355 360 365Ile Leu Phe His Tyr Thr Asp Trp Val Asp Asp Gln Arg Pro Glu Asn 370 375 380 Tyr Arg Glu Ala Leu Gly Asp Val Val Gly Asp Tyr Asn Phe Ile Cys 385 390 395 400 Pro Ala Leu Glu Phe Thr Lys Lys Phe Ser Glu Trp Gly Asn Asn Ala 405 410 415 Phe Phe Tyr Tyr Phe Glu His Arg Ser Ser Lys Leu Pro Trp Pro Glu 420 425 430 Trp Asn Gly Val Met His Gly Tyr Glu Ile Glu Phe Val Phe Gly Leu 435 440 Pro Leu Glu Arg Arg Asp Asn Tyr Thr Lys Ala Glu Glu Ile Leu Ser 450 455 Arg Ser Ile Val Lys Arg Trp Ala Asn Phe Ala Lys Tyr Gly Asn Pro 465 470 475 480 Asn Glu Thr Gln Asn Asn Ser Thr Ser Trp Pro Val Phe Lys Ser Thr 485 490 495 Glu Gln Lys Tyr Leu Thr Leu Asn Thr Glu Ser Thr Arg Ile Met Thr 500 505 510Lys Leu Arg Ala Gln Gln Cys Arg Phe Trp Thr Ser Phe Phe Pro Lys 515 520 Val Leu Glu Met Thr Gly Asn Ile Asp Glu Ala Glu Trp Glu Trp Lys 530 540

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X16700B_US seq list revised Natl 12May2005.ST25.txt Gly Leu Lys Ile Phe Phe Pro Gly Val Ser Glu Phe Gly Lys Glu Ser 355 360 365 Ile Leu Phe His Tyr Thr Asp Trp Val Asp Asp Gln Arg Pro Glu Asn 370 375 380 Tyr Arg Glu Ala Leu Gly Asp Val Val Gly Asp Tyr Asn Phe Ile Cys 385 390 400 Pro Ala Leu Glu Phe Thr Lys Lys Phe Ser Glu Trp Gly Asn Asn Ala 405 410 415 Phe Phe Tyr Tyr Phe Glu His Arg Ser Ser Lys Leu Pro Trp Pro Glu 420 430 Trp Met Gly Val Gly His Gly Tyr Glu Ile Glu Phe Val Phe Gly Leu 435 440 445 Pro Leu Glu Arg Arg Asp Asn Tyr Thr Lys Ala Glu Glu Ile Leu Ser 450 460 Arg Ser Ile Val Lys Arg Trp Ala Asn Phe Ala Lys Tyr Gly Asn Pro 465 470 475 480 Asn Glu Thr Gln Asn Asn Ser Thr Ser Trp Pro Val Phe Lys Ser Thr 485 490 495 Glu Gln Lys Tyr Leu Thr Leu Asn Thr Glu Ser Thr Arg Ile Met Thr 500 505 510 Lys Leu Arg Ala Gln Gln Cys Arg Phe Trp Thr Ser Phe Phe Pro Lys 515 520 525 Val Leu Glu Met Thr Gly Asn Ile Asp Glu Ala Glu Trp Glu Trp Lys 530 540 Ala Gly Phe His Arg Trp Asn Asn Tyr Met Met Asp Trp Lys Asn Gln 545 550 560 Phe Asn Asp Tyr Thr Ser Lys Lys Glu Ser Cys Val Gly Leu 565 570

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Page 268

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X16700B_US seq list revised Natl 12May2005.ST25.txt 420 430

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X16700B_US seq list revised Natl 12May2005.ST25.txt 245 250 255 Glu Thr Glu Ile Ile Lys Cys Leu Arg Asn Lys Asp Pro Gln Glu Ile 260 265 270 Leu Leu Asn Glu Ala Phe Val Val Pro Tyr Gly Thr Pro Leu Ser Val 275 280 285 Asn Phe Gly Pro Thr Val Asp Gly Asp Phe Leu Thr Asp Met Pro Asp 290 295 300 Ile Leu Leu Glu Leu Gly Gln Phe Lys Lys Thr Gln Ile Leu Val Gly 305 310 315 320 Val Asn Lys Asp Glu Gly Thr Ala Phe Leu Val Tyr Gly Ala Pro Gly 325 330 335 Phe Ser Lys Asp Asn Asn Ser Ile Ile Thr Arg Lys Glu Phe Gln Glu 340 345 350 Gly Leu Lys Ile Phe Phe Pro Gly Val Ser Glu Phe Gly Lys Glu Ser 355 360 365 Ile Leu Phe His Tyr Thr Asp Trp Val Asp Asp Gln Arg Pro Glu Asn 370 375 380 Tyr Arg Glu Ala Leu Gly Asp Val Gly Asp Tyr Asn Phe Ile Cys 385 390 395 Pro Ala Leu Glu Phe Thr Lys Lys Phe Ser Glu Trp Gly Asn Asn Ala 405 410 415 Phe Phe Tyr Tyr Phe Glu His Arg Ser Ser Lys Leu Pro Trp Pro Glu 420 425 430 Trp Met Gly Val Met His Thr Tyr Glu Ile Glu Phe Val Phe Gly Leu 435 440 445 Pro Leu Glu Arg Arg Asp Asn Tyr Thr Lys Ala Glu Glu Ile Leu Ser 450 460 Arg Ser Ile Val Lys Arg Trp Ala Asn Phe Ala Lys Tyr Gly Asn Pro 465 470 475 480 Asn Glu Thr Gln Asn Asn Ser Thr Ser Trp Pro Val Phe Lys Ser Thr 485 490 495

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Page 275

X16700B_US seq list revised Natl 12May2005.ST25.txt 70 75 80 · 65 Met Trp Asn Pro Asn Thr Asp Leu Ser Glu Asp Cys Leu Tyr Leu Asn 90 95 Val Trp Ile Pro Ala Pro Lys Pro Lys Asn Ala Thr Val Leu Ile Trp 100 105 110 Ile Tyr Gly Gly Gly Phe Gln Thr Gly Thr Ser Ser Leu His Val Tyr 115 120 125 Asp Gly Lys Phe Leu Ala Arg Val Glu Arg Val Ile Val Val Ser Met 130 140 Asn Tyr Arg Val Gly Ala Leu Gly Phe Leu Ala Leu Pro Gly Asn Pro 145 150 155 160 Glu Ala Pro Gly Asn Met Gly Leu Phe Asp Gln Gln Leu Ala Leu Gln 165 170 175 Trp Val Gln Lys Asn Ile Ala Ala Phe Gly Gly Asn Pro Lys Ser Val 180 185 Thr Leu Phe Gly Glu Ser Ala Gly Ala Ala Ser Val Ser Leu His Leu 195 200 205 Leu Ser Pro Gly Ser His Ser Leu Phe Thr Arg Ala Ile Leu Gln Ser 210 220 Gly Ser Xaa Asn Ala Pro Trp Ala Val Thr Ser Leu Tyr Glu Ala Arg 225 230 235 240 Asn Arg Thr Leu Asn Leu Ala Lys Leu Thr Gly Cys Ser Arg Glu Asn 245 250 255 Glu Thr Glu Ile Ile Lys Cys Leu Arg Asn Lys Asp Pro Gln Glu Ile 260 265 270 Leu Leu Asn Glu Ala Phe Val Val Pro Tyr Gly Thr Pro Leu Ser Val 275 280 285 Asn Phe Gly Pro Thr Val Asp Gly Asp Phe Leu Thr Asp Met Pro Asp 290 295 300 Ile Leu Leu Glu Leu Gly Gln Phe Lys Lys Thr Gln Ile Leu Val Gly 305 310 315 320

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X16700B_US seq list revised Natl 12May2005.ST25.txt

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X16700B_US seq list revised Natl 12May2005.ST25.txt Ile Tyr Gly Gly Gly Phe Gln Thr Gly Thr Ser Ser Leu His Val Tyr 115 120 125 Asp Gly Lys Phe Leu Ala Arg Val Glu Arg Val Ile Val Val Ser Met 130 . 135 140 Asn Tyr Arg Val Gly Ala Leu Gly Phe Leu Ala Leu Pro Gly Asn Pro 145 150 155 160 Glu Ala Pro Gly Asn Met Gly Leu Phe Asp Gln Gln Leu Ala Leu Gln 165 170 175 Trp Val Gln Lys Asn Ile Ala Ala Phe Gly Gly Asn Pro Lys Ser Val 180 185 190 Thr Leu Phe Gly Glu Ser Ala Gly Ala Ala Ser Val Ser Leu His Leu 195 200 205 Leu Ser Pro Gly Ser His Ser Leu Phe Thr Arg Ala Ile Leu Gln Ser 210 215 220 Gly Ser Xaa Asn Ala Pro Trp Ala Val Thr Ser Leu Tyr Glu Ala Arg 225 230 235 240 Asn Arg Thr Leu Asn Leu Ala Lys Leu Thr Gly Cys Ser Arg Glu Asn 245 250 255 Glu Thr Glu Ile Ile Lys Cys Leu Arg Asn Lys Asp Pro Gln Glu Ile 260 265 270 Leu Leu Asn Glu Ala Phe Val Val Pro Tyr Gly Thr Asn Leu Ser Val 275 . 280 . 285 Asn Phe Gly Pro Thr Val Asp Gly Asp Phe Leu Thr Asp Met Pro Asp 290 300 Ile Leu Leu Glu Leu Gly Gln Phe Lys Lys Thr Gln Ile Leu Val Gly 305 310 315 320 Val Asn Lys Asp Glu Gly Thr Ala Phe Leu Ala Tyr Gly Ala Pro Gly
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X16700B_US seq list revised Natl 12May2005.ST25.txt Ile Leu Phe His Tyr Thr Asp Trp Val Asp Asp Gln Arg Pro Glu Asn 370 375 380 Tyr Arg Glu Ala Leu Gly Asp Val Val Gly Asp Tyr Asn Phe Ile Cys 385 390 395 Pro Ala Leu Glu Phe Thr Lys Lys Phe Ser Glu Trp Gly Asn Asn Ala 405 410 415 Phe Phe Tyr Tyr Phe Glu His Arg Ser Ser Lys Leu Pro Trp Pro Glu 420 425 430 Trp Met Gly Val Met His Gly Tyr Glu Ile Glu Phe Val Phe Gly Leu 435 440 Pro Leu Glu Arg Arg Asp Asn Tyr Thr Lys Ala Glu Glu Ile Leu Ser 450 460 Arg Ser Ile Val Lys Arg Trp Ala Asn Phe Ala Lys Tyr Gly Asn Pro 465 470 475 480 Asn Glu Thr Gln Asn Asn Ser Thr Ser Trp Pro Val Phe Lys Ser Thr 485 490 495 Glu Gln Lys Tyr Leu Thr Leu Asn Thr Glu Ser Thr Arg Ile Met Thr 500 505 510Lys Leu Arg Ala Gln Gln Cys Arg Phe Trp Thr Ser Phe Phe Pro Lys 515 520 525 Val Leu 530